

Impact of Asian dust on climate and air quality

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Dust generated from Asian permanent desert and desertification areas can be efficiently transported around the globe, making significant radiative impact through their absorbing and scattering solar radiation and through their deposition on snow and ice to modify the surface albedo. Asian dust is also a major concern of surface air quality not only in the source and immediate downwind regions but also areas thousands of miles away across the Pacific. We present here a global model, GOCART, analysis of data from satellite remote sensing instrument (MODIS, MISR, CALIPSO, OMI) and other observations on Asian dust sources, transport, and deposition, and use the model to assess the Asian dust impact on global climate and air quality.